THE IMMIGRATION OF LEPIDOPTERA TO THE BRITISH ISLES IN 1986

By R. F. BRETHERTON* and J. M. CHALMERS-HUNT**

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ANNEXE II

Records of scarcer immigrant species in 1986

Suspected immigrants of resident species are marked *. Unless otherwise indicated single examples are referred to. Dates for nocturnal species are for the beginning of the night as far as possible, and are of insects seen in traps or otherwise at light in the field. Names of direct records are abbreviated to their initials; names of indirect recorders appear in full.

*Evergestis extimalis Scop. (2). NORFOLK v.c.27. Scratby, mid July; Winterton-on-sea, mid July (KS, Norfolk moth survey). Probably immigrants.

*Sitochroa palealis D. & S. (5). DORSET, St. Alban's Head, 10.8, two (PAD). HANTS. v.c.12. Winchester (DHS), for 3rd successive year. SUSSEX v.c.14. Peacehaven, 27.2 (CRP). KENT v.c.16. East Malling, 16.7 (D. A. Chambers *Ent. Rec.* 98:257).

*Ostrinia nubilalis Hubn. (c.50). DEVON v.c.3. Axminster, several, believed to be resident nearby (ECP-C). NORFOLK v.c.27, late June/July, several (KS). SUSSEX v.c.14, Peacehaven 26/27.6 (5); 13.7 (2); 14.7 (3); 12.7 (6); 21 and 22.7 – 22 in all (CRP). Some or all possible immigrant: coincidence of dates with other immigrants.

Papilio machaon L. (2). KENT v.c.15. Whiteness Point, Broadstairs, 21.9, closely watched and identified, then flew towards Margate (S. Mount). SURREY. Peaslake, 29.9, caught by Mrs. Sherlock and examined by Maj. Gen. H. Bainbridge, (*pers comm*).

Colias hyale L. or C. australis Verity. (1). HANTS. v.c.11. New Forest, 2.7, one watched imbibing on a *Hieracium* blossom, then chased for some distance but not caught. The recorder is certain that it was not *C. croceus* f. *helice* but could not determine to which of the two other species it belonged (CJL).

Vanessa antiopa L. (2). GLOS. Shipston Moyne, 15.8, in garden (P. Hardie). ABERDEENSHIRE v.c.92. Cults, Aberdeen, 5.8, one seen (per MRY). We have also been reliably informed that an unstated number of adults of Canadian origin were released in a wood near Northampton c.6.8.86 (JHP).

*Folly Hill, Birtley Green, Bramley, Guildford, Surrey GU5 OLE. **1 Hardcourts Close, West Wickham, Kent BR4 9LG.

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Melitaea didyma Esp. (4-5). ESSEX v.c.18. Four or five examples were seen flying on 6.8 in a remote part of the Thames marshes by boys from a neighbouring school. Two were caught and were sent by the Biology master, C. H. S. Hodder, to the Nature Conservancy, Peterborough, where their identity was determined from a small, rather dark male; also locally by G. A. Pyman. It is improbable that they could have resulted from local rearing in captivity, of which none is known near the area. The numbers seen together in one place suggest that they may have been offspring of an earlier arrival which perhaps came off a ship passing nearby. The only previous record is of a specimen said to have been caught near Dumfries, south west Scotland, in 1886 (Entomologist 10:25; Thompson The Butterflies of Scotland, pp. 164-165).

Danaus plexippus L. (1) CORNWALL v.c.1. Lemon Street, Truro, one seen flying on 17.9 (A. J. H. Trumble, per RDP). In the absence of other records for 1986, this must be regarded as a doubtful record or possibly an escape.

Cyclophora puppillaria Hubn. (1) SUSSEX v.c.13. Worthing, 14.10, female, from which eggs produced 52 pupae, the imagines from which emerged by 17.12, and were of several forms (SO).

Rhodometra sacraria L. (5). ISLE OF SCILLY St. Mary's, 3.9 (SN), 13.10 (MGWT). KENT v.c.15, Dymchurch, 26.8 (JAO); Hartlip, 11.10 (REL & CEL). MERIONETH Cors-y-Sarnau, Bala, 2.7 (HNM, BENHS exhibition).

Orthonama obstipata Fab. (9). CORNWALL v.c.2. Trebrownbridge, 10.5, male, 13.10 male (AS). DORSET Portland B.O., 11.10 (MR). HANTS. ISLE OF WIGHT v.c.10 Freshwater, 9.10 (BS). HANTS. v.c.11. Hayling Island, 8.10, male (JMW). SUSSEX v.c.13. Worthing, 2.10 (SO). Walberton, 13.7; 12.8 (J. Radford per CRP).

*Thera cupressata Geyer (3 and larvae). GUERNSEY St. Peter's Port, July 10,11 (PDMC). It was first caught there on October 17 and 19, 1985 (PDMC and TNDP *Ent. Rec.* 98: 217-218, figure). ALDERNEY October 1986, one at actinic light and two very small larvae from *Cupressus macrocarpa* were successfully reared. It can now probably be regarded as a resident in these islands, but as yet has not been found on the British mainland. It could easily be overlooked owing to its close resemblance to *T. juniperata* L.

Semiothisa signaria L. (4). KENT v.c.15. Orlestone Woods, 15.7, two worn males (JLF & MH). SUSSEX v.c.13 Worthing, 28.6 (SO *Ent. Rec.* 99:133); Steyning 6.7 (MJE per BS). Previous records are Essex, 20.6.1970 and Orlestone Woods 31.7.1984.

*Chlorissa viridata L. (1). KENT v.c.15 Orlestone Woods, 27.6 (C. Hart per BS). (See also *D. bankiana*).

*Eupithecia abietaria Goeze (4). LINCOLNSHIRE v.c.54, Willoughby, 19.6 (REM Pilcher per BS). HANTS. v.c.12, Sparsholt, 27.6 (R. Bell per BS). SUSSEX v.c.14. Beckley, 15.7 (M. Tweedie per BS). KENT v.c.16, Dartford, 21.7 (B.K.West per BS).

*Ennomos autumnaria Wernb. (1). KENT v.c.15. Dungeness, 27.9 (JMC-H). Though fairly widespread in Kent and at times certainly resident, it has long been suspected of being also immigrant.

Agrius convolvuli L. (19 and 1 larva). ISLES OF SCILLY St. Mary's, 3.9; 7.9 (SN). CORNWALL v.c.1. Mawnan Smith, 13.10 (APF). DEVON v.c.3, Prawle Point, 9.9. (R. Andrew per VT). DORSET Portland B.O., 29.8 (MR). ESSEX v.c. 18. Bradwell-on-Sea, 27.8, male; 6.10 one larva (AJD). NORFOLK v.c.27 Winterton-on-Sea, 26.6 (KS). SUSSEX v.c.13. Walberton, 14.10 (J.Radford per CRP); Angmering, 15.10 (S.W.Gale per BS). SUSSEX v.c.14, Seaford, at rest (per CRP); Eastbourne, 29.8, at rest (N.Steer per CRP); Bexhill, late 9 & Golden Cross, 17.9 (Rushen per CRP). WARWICKS Rugby, 13.10, male (D.E. Porter per DCGB). CUMBRIA Beetham, 12.10 (JB). ABERDEEN. v.c.93. Old Meldrum, 18.8 (MRY). AR-GYLL v.c.98. Balcardine, 7.10 (JCAC). INNER HEBRIDES. Isle of Canna, October (J. Cambell per P. Wormell). ORKNEY, 10.8 (RIL).

Acherontia atropos L. (2 and 1 pupa). SUSSEX v.c.14. Worthing, 17.8 (J. Remfrey per SO). WARWICKS, 2.9, pupa in potato field (I. Reid per DCGB). NORTH SEA. Forties Oil Field, one alive on oil rig (per MRY).

Hyles livornica Esp. (1). DEVON v.c.3. Axminster, 3.7 (ECP-C).

*Leucoma salicis L. (43). CORNWALL v.c.2. Mawnan Smith, 27.6 (6); 28.6 (9); 29.6 (7), all males (APF). CORNWALL v.c.2. Trebrowbridge, 26.6; 27.6 (2) (AS); Bodelva, near Par, 24.6 (L. Gregory per AS); Seaton, 28.6 (AS). DORSET St. Alban's Head, 29.6 (PAD). BERKS. Aldermaston, 9.7 (PAD). SURREY. Compton Down, 7.7; Milford, 14.7 (DWB). GUERNSEY. St. Peter's port and two other localities, 19.6, two males; 26.6, c.ten females, 2.7, one female (PDMC, TNDP, RA). It is clear from the conjunction and dates that most, if not all of these were immigrants.

Lymantria dispar L. (1). HANTS. Portland B.O., 10.9, male (MR). *Atolmis rubricollis L. (5). CORNWALL v.c.1. Trebrownbridge, 29.8; Portwrinkle, 14.7 (AS). ESSEX v.c.18. Bradwell-on-Sea, 5.7, two females (SD); Colchester, 26.6 (B. Goody per BRS). Possibly immigrants.

*Lithosia quadra L. (7). CORNWALL v.c.1. Cadgwith, 1.10 (KGWE), where it may be resident. DEVON v.c.3. Axminster, 10.8, female (ECP-C). DORSET St. Alban's Head, 11.8 (PAD). KENT v.c.16. Faggs Wood, 24.7, 29.7. Both males. (BS). SUSSEX v.c. 13. Walberton, 30.7 (J. Radford per CRP). CUMBRIA. Beetham, 5.7 (JB). Possibly immigrants.

*Pelosia muscerda Hufn. (1). ESSEX v.c.18, Bradwell-on-Sea, 31.7 (AJD). About 70 miles from nearest known colony.

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Agrotis crassa Hubn. (1) SUSSEX v.c.14. Playden, 7.8 (MGWT). First confirmed record for mainland Britain. The only Irish record was in 1984, and it was caught again in 1986 (RA), where it is probably resident.

Actinotia polyodon C1. (1). ESSEX v.c.18. Bradwell-on-Sea, 17.6, male (AJD).

***Polia nebulosa** Hufn. (4). DORSET Portland B.O., 30.6; 2.7 (MR). ESSEX v.c.18. Bradwell-on-Sea, 4.7; 6.7, two (AGD, SD). Probably immigrant as essentially a woodland insect.

*Rhyacia simulans Hufn. (1). SUSSEX v.c.14. Rye Harbour, 17.9 (MFWT).

Mythimna albipuncta D. & S. (21). ISLES OF SCILLY. St. Mary's, 3-11.9, six (SN); 13.10 (MWGT). DORSET Portland B.O., 17.9, 6.10; Swanage 10.10 (BRB). KENT v.c.15. Dungeness, 30.8, female (A. C. Gardner per DCGB), 4.10, female; 12.10. male (BS). HANTS v.c.11. Hayling Island, 2.9; 10.9 (JMW). SURREY Milford, 2.9 (DWB). SUSSEX v.c.14. Newhaven, 25.6; 2.7 (S. Curson per CRP); Peacehaven, 14.9; 22.9 (CRP). SUSSEX v.c.13. Walberton, 29.9 (J. Radford per CRP).

Mythimna vitellina Hubn. (c.11). ISLE OF SCILLY St. Mary's, 6.9; 10.9 (SN). CORNWALL v.c.1. Cadgwick, 20.9 (KWGE);Mawnan Smith, 12.10 (APF). DEVON v.c.3. Axminster, 2.6 (ECP-C). DOR-SET Portland B.O., 17.6; 4.10 (MR). HANTS. v.c.11. Swathling, 13.8 (MWGT). GUERNSEY 17.6; 12.10 (TNDP per RA).

Mythimna loreyi Dup. (1). HANTS. v.c.11. Hayling Island, 10.7, female, eggs infertile (JWM).

Mythimna unipuncta Haw. (16). ISLE OF SCILLY St. Mary's, 5.9; 6.9; 9.9 (SN). CORNWALL v.c.1. Mawnan Smith, 12.10 (APF). CORNWALL v.c.2. Trebrownbridge, 10.11 (AS). ISLE OF WIGHT Freshwater, no exact date (SAK-J).

*Leucochlaena oditis Hufn. (2). CORNWALL v.c.1. Mawnan Smith, 13.10, male. CORNWALL v.c.2. Portwrinkle, 12.10 (AS). Possible immigrants, otherwise recent westward spread.

Polyphaenis sericata Esp. (1). GUERNSEY. Petit Bot Valley, 14.8. Previously known only from several specimens in the collection of W. A. Luff, caught at sugar in 1972 (pers comm and *Ent. Rec.* 99:85-86). There are no known records from the mainland of Britain or Ireland, but it is widespread in France, where the larva feeds nocturnally on *Lonicera, Ligustrum* or *Cornus* sp.

Trachea atriplicis L. (4). ESSEX v.c.18. Bradwell-on-Sea, 6.7 (SD); Tillingham, 8.7, male (BS). KENT v.c.15. Dungeness, 8.8, 100 infertile eggs (DEW, *Ent. Rec.* 99: 35). SUFFOLK v.c.25. St. Olave's, Yarmouth, 4.7, male (H. E. Jenner per BS; BENHS exhibition).

*Enargia paleacea Esp. (1). KENT v.c.15. Dungeness, 10.8 (G.B. Senior per BS).

Spodoptera exigua Hubn. (8). ISLES OF SCILLY St. Mary's, 3.9;

5.9; 7.9; 9.9 (SN). DEVON v.c.3. Axminster, 2.7 (ECP-C). WAR-WICKS. Charlecote, 4.7 (DCGB). CUMBRIA Beetham, 23.9; 26.9 (JB).

*Heliothis viriplaca Hufn. (1). HANTS. v.c.12. Winchester, 16.7 (DHS). Probably immigrant, as it is believed to be extinct in its former Hampshire localities.

Heliothis peltigera D. & S. (c.67 imagines, c.35 larvae). BERKS. Fernham, 28.9; 2.7; 4.7; 5.7 (SN). BERKS. Aldermaston, 10.7 (PAD). ISLES OF SCILLY St. Mary's, 4.9 (SN). CORNWALL v.c.1. Mawnan Smith, 27.7; 28.7, two; 29.9, two. All males (APF). CORN-WALL v.c.2. Trebullet, 12.7; Portwrinkle, 12.10 (AS). DEVON v.c.3. Axminster, 29.6; 4.7 (ECP-C). DORSET St. Alban's Head, 29.6 (PAD); Portland, 28.6 (2); 13.7 (3), (DCGB); 5.7 (5), (G.B. Senior per BS). Portland B.O., 13.7; 26.9; 7.10 (MR); Holt Heath, 12.7 (Miss MB); Preston, 14.7 (MC); Swanage, 14.10, two (BRB); Lyme Regis, 23.8, one larva, (BRB). ESSEX v.c.18. East Ham, 2.7 (CWP); Bradwell-on-Sea, 8.7; 12.7; 2.10 (AJD, SD). ESSEX v.c.19. Saffron Walden, 9.10 (AME). HANTS. v.c.11. Hayling Island, 3.7, one very pale, 5.9, one very dark, possibly locally bred (JMW); Highcliffe, 15.7 (EHW). HANTS. v.c.12. Winchester, 6.7 (DHS); Sparsholt, 16.7 (R. Bell per BS). KENT v.c.15. Dungeness, 27.9; 4.10 (BS); 29.9, several (JMC-H, BENHS field meeting); Greatstone, 30.9 (S. Clancy per BS); Minster-in-Sheppy, 1.7 (GNB); Canterbury, no exact date (TWH). Larvae: Dungeness, 4.9, several (BS); 7.8, 12.8, several (MH); 12.10, sixteen (REL, CEL). KENT v.c.16. Dartford, 12.7 (BKW); Orpington, 6.8, male (PAS); Rainham, 5.10 (MH). SURREY Milford, 10.7 (DWB); Rushmoor, 10.7 (PAD); Wisley R.H.S., 29.8 (AJH). SUSSEX v.c.14. Newhaven, 9.7 (S. Curson per CRP); Rye, 15.7 (CRP); Haywards Heath, 15.9 (S. Pooles per CRP). Larvae: Eastbourne, 8.7, eight very small (MSP); Newhaven, 5.9, one (CRP). SUSSEX v.c.13. Walberton, 4.7 (J. Radford per CRP). WARWICKS. Bidford-on-Avon, 9.7 (R. Cox per DCGB); Marton nr. Rugby, 21.7 (R. Allen per DCGB). AYRSHIRE Newmilns, 14.7 (per EGH), GUERNSEY St. Peter Port, 19.6 (PD-MC), 29.6, three (RA).

Lithacodia deceptoria Scop. (1). NORFOLK v.c.27. Swanton Abbot, 16.6 (A. Wallis, teste G. M. Hagget, per KS, Norwich Moth Survey).

*Deltote bankiana Fab. (10). ESSEX v.c.18. Bradwell-on-Sea, 29.6, two; 1.7; 2.7, two; 3.7 (AJD, SD). Tillingham, 9.7 (BS). ESSEX v.c.19. St. Osyth, 30.6 (R. Arthur per BS). KENT v.c.15. Ham Street Woods, 27.6 (Hart, *Ent. Rec.* 99: 10). SUSSEX v.c.14. Playden, 2.7 (MFWT).

Chrysodeixis chalcites Esp. (1). KENT v.c.15. St. Margaret's Bay, 30.9 (J. R. Langmaid per AME).

Chrysodeixis acuta Walker. (2). KENT v.c.15. Sandwich Bay Ob-

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servatory, 18.10 (TWH). SUFFOLK v.c.26. Bury St. Edmunds, 6.10 (RE).

Diachrysia orichalcea Fab. (1). SUSSEX v.c.13. Walberton, 2.9 (J. Radcliff per CRP).

Trichoplusia ni Hubn. (1). DORSET Swanage, 10.10 (BRB).

*Abrostola trigemina Werneb. (1). HANTS. v.c.11. Hayling Island, 10.7 (JMW). Caught with *M. loreyi*, possibly immigrant.

Catocala fraxini L. (2). HANTS. v.c.10. Freshwater, Isle of Wight, 7.10 (Dr. C. Pope DHS). DORSET Langton Matravers, 9.9, female (E. W. Groves, *Ent. Gaz.* 38: 58).

*Catocala sponsa L. (4). DORSET Portland, 11.8 (R. A. Bell per BS). Weymouth, 11.8 (Parker, *Ent. Rec.* 99:133). HANTS. v.c.11. Hayling Island, 19.8 (JMW). SUSSEX Worthing, 8.8 (Odell *Ent. Rec.* 99: 132). A woodland species some distance from nearest known places of residence in the New Forest. Possibly immigrants.

SPHEGINA KIMAKOWICZI STROBL (DIPT.: SYRPHIDAE) IN W. KENT AND S. ESSEX. - I was pleased to sweep a male Sphegina on 25.vi.86 from a mass of hedge-parsley (its flowers, of course, long over) beside a path in the woods on Shooters Hill near here; it being the first of the genus to be found in the district, and only the second I had ever taken. I supposed it would prove to be the least uncommon of our three species, clunipes Fall., but reference to Collin (1937, Ent. mon.Mag. 73: 182-5) showed it very clearly to be S. kimakowiczi Strobl, which at all events up to 1969 was not known from Kent at all, and even now I am aware of no definite record for the county. However, Stubbs & Falk (1983, British Hoverflies: 189) point out that in many districts it is quite as common [!] as *clunipes*. Further, it turns out that the *Sphegina* I had previously taken (Wake Valley, Epping Forest, 16.vii.69) was misidentified at the time as *clunipes* but is actually another male kimakowiczi, and I have yet to find the former species.

The sole characters given for the last-named in Stubbs & Falk (*op. cit.*: 94, 189) are the clear yellow humeri and the slight one of abdominal shape. Should the humeral colour be a little darkened (at least hinted at in my examples) it becomes desirable to make use of other characters. These will be found in Collin's paper cited above and reproduced in Coe's handbook (1953:53), where are illustrated considerable differences in the third antennal segment and the face in profile, between the two species in question; whilst in the position of the outer crossvein, *kimakowiczi* agrees with *verecunda* Coll. and not with *clunipes*, as noted in Collin's key. – A. A ALLEN, 49 Montcalm Road, London SE7.

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